

10/706,948

REMARKS

This amendment is being filed in response to the Office Action dated November 14, 2005. For the following reasons, this application should be considered in condition for allowance and the case passed to issue.

The amendment made to the specification corrects an obvious grammatical error and does not add new matter to the application.

The indication of allowability of claims 16-21 is gratefully acknowledged. Accordingly, claim 16 has been rewritten in independent form to include all of the limitations of the base claims and any intervening claims. These claims should now be considered in condition for allowance and passed to issue.

Only the rejection of claims 14-15 remain at issue in the application. These claims were rejected under 35 USC §102(e) as being anticipated by Kim et al. (hereafter "Kim"). This objection is hereby traversed and reconsideration and withdrawal thereof are respectfully requested. The following is a comparison of the embodiments of the present invention, as recited in amended claim 14, with the Kim reference.

As recited in amended claim 14, the embodiments of the present invention provide a method of forming a multiple-channel semiconductor device comprising the step of forming a stack on a substrate. The stack includes at least two lightly doped channel regions vertically separated from each other and from the substrate only by insulator layers, and a single gate electrode located above and separated from the channel regions by an insulator layer. An oxide liner is formed on the side walls of the gate electrode. Source and drain regions are formed that contact the side walls of the channel regions. The method also comprises forming gate electrode spacers on the oxide liner on the gate electrode.

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In order to anticipate claims of a patent application under 35 USC §102, a single prior art reference must identically disclose each and every element of the claimed invention. It is respectfully submitted that Kim fails to identically disclose each and every element of amended claim 14. In contrast to the present invention, Kim provides for a plurality of gates interposed between the channels. Referring, for example, to Figure 3R, the structure formed by Kim includes a plurality of channels 44a and 44b with source/drain extension layers 32 connected to source/drain regions 34. A gate electrode 48 is formed by filling up tunnels 42a and 42b (see Figure 3P) to surround the plurality of channels 44a and 44b. Hence, the gate electrode material, as shown especially well in Figure 3R, is interposed between the channels 44a and 44b. An oxide layer 46 insulates the individual gate electrodes 48 from the channels 44a, 44b. Hence, the channel regions are vertically separated from each other and from the substrate not only by insulator layers, but by the gate electrodes. This is in contrast to the present invention as currently claimed in claim 14. The amended claim requires that the stack include at least two lightly doped channel regions vertically separated from each other and from the substrate only by insulator layers.

Claim 14 of the invention also requires that the stack includes a single gate electrode that is located above and separated from the channel regions by an insulator layer. By contrast, the gate electrode 48 in Kim is said to surround the plurality of channels 44a and 44b (see paragraph [0081]). Kim thereby provides an entirely different structure, and fails to disclose identically each and every step of the claimed invention as provided in amended claim 14.

Since Kim fails to identically disclose each and every element of the claimed invention, the rejection of amended claim 14 and claim 15 under 35 USC §102(e) based on Kim should be reconsidered and withdrawn. Such action is courteously solicited.

In light of the amendments and remarks above, this application should be considered in condition for allowance and the case passed to issue. If there are any questions regarding this

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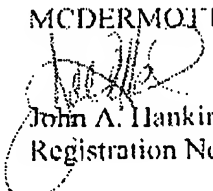
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amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 502624 and please credit any excess fees to such deposit account.

Respectfully submitted,

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